IN THE CLAIMS:

1. 1. – 5. (Cancelled)

1. 6. (Currently Amended) A method of claiming ownership of a plurality of disks by a net-
2. work device of a plurality of network devices in a network storage system, comprising:
3.   writing ownership information to a predetermined area of each disk, wherein the
4. predetermined area of the disk is sector 0 on the disk and the ownership information
5. stored in sector 0 is definitive ownership data for determining ownership of the disk;
6.   setting a small computer system interface (SCSI) reservation tag for each disk to a
7. state of network device ownership to provide a two part indicia of ownership for each
8. disk, where the two part indicia of ownership are both written to each disk;
9.   creating a table on each network device in the network storage system;
10.   identifying all disks owned by the each network device using ownership informa-
11. tion written to the predetermined area of each disk of the plurality disks and, for each
12. identified disk, if a mismatch occurs between the ownership information on the prede-
13. termined area of the disk and the ownership defined by the SCSI reservation tag, then us-
14. ing the ownership information written to the predetermined area of the disk as definite
15. ownership data; and
16.   in response to identifying, storing entries in the table, wherein each entry identi-
17. fies an owned disk of the network device storing the table.

1. 7. (Original) The method of claim 6 wherein the ownership information further com-
2. prises a serial number of a network device.

1. 8. (Original) The method of claim 6, wherein the network device comprises a file server.

1. 9. (Currently Amended) A network storage system comprising:

2   a plurality of network devices;

3   one or more switches, each network device connected to at least one of the one or

4   more switch;

5   a plurality of disks having a first ownership attribute written to a predetermined

6   area of each disk and a second ownership attribute in the form of a small computer sys-

7   tem interface (SCSI) reservation tag, wherein the first and second ownership attribute are

8   written to each disk, each disk connected to at least one of the plurality of switches, .

9   wherein the predetermined area of the disk is sector 0 on the disk and the ownership in-

10   formation stored in sector 0 is definitive ownership data for determining ownership of the

11   disk;

12   each network device of the plurality of network devices identifies all disks owned

13   by that network device using ownership information written to the predetermined area of

14   each disk of the plurality disks and, for each identified disk, if a mismatch occurs be-

15   tween the ownership information on the predetermined area of the disk and the ownership

16   defined by the SCSI reservation tag, then using the ownership information written to the

17   predetermined area of the disk as definite ownership data and each network device is con-

18   figured with a table and to store entries in a table, wherein each entry identifies an owned

19   disk of the network device storing the table.

1   10. (Cancelled)

1   11. (Previously Presented) The network storage system of claim 9, wherein the small

2   computer system interface reservation tag is a small computer system interface level 3

3   persistent reservation tag.

1   12. (Previously Presented) The networked storage system of claim 9, wherein the small

2   computer system interface reservation tag is set such that only the network device may

3   write to the disk.

13. (Previously Presented) The network storage system of claim 9, wherein the first ownership attribute further comprises a serial number of the network device that owns that particular disk.

14. (Previously Presented) The network storage system of claim 9, wherein each of the plurality of file servers can read data from each of the plurality of disks.

15. (Previously Presented) The network storage system of claim 9, wherein only a network device that owns one of the plurality of disks can write data to the one disk.

16. (Original) The network storage system of claim 9, wherein the network devices comprise file servers.

17. (Currently Amended) A network storage system comprising:

> a plurality of network devices;
>
> one or more switches;
>
> a plurality of disks; and
>
> means for writing ownership information to a predetermined area of each disk of the plurality of disks, wherein the predetermined area of the disk is sector 0 on the disk and the ownership information stored in sector 0 is definitive ownership data for determining ownership of the disk;
>
> means for setting a small computer system interface reservation tag of each disk to provide a two part indicia of ownership, where the two part indicia of ownership are written to each disk;
>
> means for creating a table on each network device in the network storage system; and
>
> means for identifying all disks owned by each network device using ownership information written to the predetermined area of each disk of the plurality disks and, for

16   each identified disk, if a mismatch occurs between the ownership information on the pre-

17   determined area of the disk and the ownership defined by the SCSI reservation tag, then

18   using the ownership information written to the predetermined area of the disk as definite

19   ownership data; and

20   in response to identifying, means for storing entries in the table, wherein each en-

21   try identifies an owned disk of the network device storing the table.

1   18. (Cancelled)

1   19. (Original) The network storage system of claim 17, wherein the network devices

2   comprise file servers.

1   20. (Currently Amended) A network storage system comprising:

2   one or more switches interconnected to form a switching fabric;

3   a plurality of disks, each of the disks connected to at least one of the switches,

4   each disk storing a first ownership attribute to a predetermined area of a disk and each

5   disk associated with a second ownership attribute in the form of a small computer system

6   interface reservation, wherein the predetermined area of the disk stores definitive owner-

7   ship data for determining ownership of the disk and the small computer system interface

8   reservation allows other network devices to read the ownership attribute from the disks;

9   and

10   one or more network devices, interconnected with the switching fabric, each of

11   the network devices being configured to own a predetermined set of disks of the plurality

12   of disks through use of the first and second ownership attributes, wherein each network

13   device identifies all disks owned by the network device using ownership information

14   written to the predetermined area of each disk of the plurality disks and, for each identi-

15   fied disk, if a mismatch occurs between the ownership information on the predetermined

16   area of the disk and the ownership defined by the SCSI reservation tag, then using the

17 ownership information written to the predetermined area of the disk as definite ownership

18 data and each network device is configured with a table and to store entries in a table,

19 wherein each entry identifies an owned disk of the network device storing the table.

1 21. (Cancelled)

1 22. (Cancelled)

1 23. (Previously Presented) The network storage system of claim 20, wherein the first

2 ownership attribute further comprises a serial number of one of the one or more network

3 devices.

1 24. (Previously Presented) The network storage system of claim 20, wherein the small

2 computer system interface reservation is a small computer system interface level 3 persis-

3 tent reservation.

1 25. (Original) The network storage system of claim 20, wherein each of the network de-

2 vices further comprises a disk ownership table, the disk ownership table containing own-

3 ership data for each of the disks.

1 26. (Original) The network storage system of claim 25, wherein the ownership table fur-

2 ther comprises a world wide name for each of the disks, the world wide name being used

3 for identification of each of the disks.

1 27. (Currently Amended) A computer-readable medium, including program instructions

2 executing on network device, for performing the steps of:

3   writing ownership information to a predetermined area of a disk, wherein the pre-

4   determined area of the disk stores definitive ownership data for determining ownership of

5   the disk;

6   setting a small computer system interface reservation tag for the disk to a state of

7   network device ownership to provide a two part indicia of ownership for the disk, where

8   the two part indicia of ownership are both written to the disk and the small computer sys-

9   tem interface reservation tag allows other network devices to read the ownership informa-

10   tion from the disks; ~~and~~

11   creating a table on each network device in the network storage system;

12   identifying all disks owned by the network device using ownership information

13   written to the predetermined area of each disk of the plurality disks and, for each identi-

14   fied disk, if a mismatch occurs between the ownership information on the predetermined

15   area of the disk and the ownership defined by the SCSI reservation tag, then using the

16   ownership information written to the predetermined area of the disk as definite ownership

17   data; and

18   in response to identifying, storing entries in the table, wherein each entry identi-

19   fies an owned disk of the network device storing the table.

1   28. (Currently Amended) A method for a network device to manage ownership of one

2   or more storage devices in a network storage system, comprising:

3   reading ownership information from a predetermined area of each storage device,

4   wherein the predetermined area of each storage device is sector 0 on the disk and the

5   ownership information stored in sector 0 is definitive ownership data for determining

6   ownership of the storage device;

7   in response to reading the ownership information, creating an ownership table that

8   ~~identifies~~ stores entries where each entry identifies ~~the one or more~~a storage devices

9   owned by the network device, wherein the ownership is stored within the network device;

10 reading a small computer system interface (SCSI) reservation tag from each stor-

11 age device, wherein the SCSI reservation tag allows other network devices to read the

12 ownership information from each storage device;

13 comparing the SCSI reservation tag to the ownership information of the same

14 storage device and, if there is not a match, changing the SCSI reservation tag to match the

15 ownership information; and

16 configuring the one or more storage devices identified in the ownership table into

17 at least one volume for use by the network device.

1 29. (Previously Presented) The method of claim 28 further comprising:

2 setting ownership information at the predetermined area of each storage device.

1 30. (Previously Presented) The method of claim 28 wherein the step of configuring fur-

2 ther comprises:

3 organizing the one or more storage devices into at least one Redundant Array of

4 Independent Disks (RAID) group.

1 31. (Previously Presented) The method of claim 28 further comprising:

2 wherein the predetermined area of the one or more storage devices is sector zero

3 of the one or more storage devices.

1 32. (Previously Presented) The method of claim 28 further comprising:

2 wherein the ownership information is a serial number of the network device that

3 owns that particular storage device.

1 33. (Previously Presented) The method of claim 28 further comprising:

2 wherein the ownership table includes a world wide name for each of the storage

3 devices, the world wide name being used to identify each of the storage devices.

34. (Currently Amended) A network device for managing ownership of one or more

storage devices in a network storage system, comprising:

means for reading ownership information from a predetermined area of each stor-

age device, wherein the predetermined area of each storage device stores definitive own-

ership information for determining ownership of the storage device;

in response to reading the ownership information, means for creating an owner-

ship table that identifies the one or more stores entries where each entry identifies a stor-

age devices owned by the network device, wherein the ownership is stored within the

network device;

means for reading a small computer system interface (SCSI) reservation tag from

each storage device, wherein the SCSI reservation tag allows other network devices to

read the ownership information from each storage device;

means for comparing the SCSI reservation tag to the ownership information of the

same storage device and, if there is not a match, changing the SCSI reservation tag to

match the ownership information; and

means for configuring the one or more storage devices identified in the ownership

table into at least one volume for use by the network device.

35. (Currently Amended) A computer readable medium containing executable program

instructions for managing ownership of one or more storage devices in a network storage

system, the executable program instructions comprising program instructions for:

reading ownership information from a predetermined area of each storage device,

wherein the predetermined area of each storage device stores definitive ownership infor-

mation for determining ownership of the storage device;

in response to reading the ownership information, creating an ownership table that

identifies the one or more stores entries where each entry identifies a storage devices

owned by the network device, wherein the ownership is stored within the network device;

10 reading a small computer system interface (SCSI) reservation tag from each stor-

11 age device, wherein the SCSI reservation tag allows other network devices to read the

12 ownership information from each storage device;

13 comparing the SCSI reservation tag to the ownership information of the same

14 storage device and, if there is not a match, changing the SCSI reservation tag to match the

15 ownership information; and

16 configuring the one or more storage devices identified in the ownership table into

17 at least one volume for use by the network device.

1 36. (Currently Amended) A network storage system, comprising:

2 one or more storage devices, each storage device having a predetermined area for

3 storing ownership information and each storage device having a small computer system

4 interface (SCSI) reservation tag, wherein the predetermined area of each storage device

5 stores definitive ownership information for determining ownership of the storage device,

6 and the SCSI reservation tag allows other network devices to read the ownership infor-

7 mation from each storage device;

8 at least one network device having an ownership table constructed based upon

9 the ownership information from each storage device, wherein the ownership is stored

10 within the network device;

11 the at least one network device having an ownership layer for comparing the SCSI

12 reservation tag to the ownership information of the same storage device and, if there is

13 not a match, changing the SCSI reservation tag to match the ownership information; and

14 the at least one network device having a disk storage layer for configuring the one

15 or more storage devices identified in the ownership table into at least one volume for use

16 by the network device.

1 37. (Previously Presented) The network storage system of claim 36 further comprising:

2 the ownership layer adapted to set ownership information at the predetermined

3 area of each storage device.

38. (Previously Presented) The network storage system of claim 36 further comprising: the disk storage layer organizing the one or more storage devices into at least one Redundant Array of Independent Disks (RAID) group.

39. (Previously Presented) The network storage system of claim 36 further comprising: wherein the predetermined area of the one or more storage devices is sector zero of the one or more storage devices.

40. (Previously Presented) The network storage system of claim 36 further comprising: wherein the ownership information is a serial number of the network device that owns that particular storage device.

41. (Previously Presented) The network storage system of claim 36 further comprising: wherein the ownership table includes a world wide name for each of the storage devices, the world wide name being used to identify each of the storage devices.

42. (Previously Presented) The method of claim 6 wherein the small computer system interface reservation tag and the ownership information at the predetermined area of the disk indicate ownership by the same network device.

43. (Previously Presented) The method of claim 6 wherein the small computer system interface reservation tag is a small computer system interface level 3 persistent reservation tag.

44. (Currently Amended) A method for a network device to manage ownership of one or more storage devices in a network storage system, comprising:

reading ownership information from a predetermined area of each storage device, wherein the predetermined area of each storage stores definitive ownership data for de-termining ownership of the storage device;

accessing a small computer system interface (SCSI) reservation tag associate with each storage device, wherein the SCSI reservation tag allows other network devices to read the ownership information from each storage device;

comparing the SCSI reservation tag to the ownership information of the same storage device and, if there is not a match, changing the SCSI reservation tag to match the ownership information; and

configuring the one or more storage devices for use by the network device; creating a table on each network device in the network storage system; and storing entries in the table, wherein each entry identifies an owned storage device of the network device storing the table.

45. (Previously Presented) The method of claim 44 wherein the small computer system interface (SCSI) reservation tag is a small computer system interface level 3 (SCSI-3) persistent reservation tag.

46. (Previously Presented) The method of claim 44 further comprising:

in response to reading the ownership information, creating an ownership table on the network device that identifies the one or more storage devices owned by the network device; and

using the ownership table to configure the one or more storage devices into at least one volume.

47. (Previously Presented) The method of claim 44 further comprising:

setting ownership information at the predetermined area of each storage device.

48. (Previously Presented) The method of claim 44 further comprising:

2 wherein the predetermined area of the one or more storage devices is sector zero

3 of the one or more storage devices.

1 49. (Currently Amended) A network storage system, comprising:

2 means for reading ownership information from a predetermined area of each stor-

3 age device, wherein the predetermined area of each storage device stores definitive own-

4 ership data for determining ownership of the storage device;

5 means for accessing a small computer system interface (SCSI) reservation tag as-

6 sociate with each storage device, wherein the SCSI reservation tag allows other network

7 devices to read the ownership information from each storage device;

8 means for comparing the SCSI reservation tag to the ownership information of the

9 same storage device and, if there is not a match, changing the SCSI reservation tag to

10 match the ownership information; ~~and~~

11 means for configuring the one or more storage devices for use by the network de-

12 vice;

13 means for creating a table on each network device in the network storage system;

14 and

15 means for storing entries in the table, wherein each entry identifies an owned stor-

16 age device of the network device storing the table.

1 50. (Currently Amended) A computer readable medium containing executable program

2 instructions for manage ownership of one or more storage devices, the executable pro-

3 gram instructions comprising program instructions for:

4 reading ownership information from a predetermined area of each storage device,

5 wherein the predetermined area of each storage device stores definitive ownership data

6 for determining ownership of the storage device;

7   accessing a small computer system interface (SCSI) reservation tag associate with

8   each storage device, wherein the SCSI reservation tag allows other network devices to

9   read the ownership information from each storage device;

10   comparing the SCSI reservation tag to the ownership information of the same

11   storage device and, if there is not a match, changing the SCSI reservation tag to match the

12   ownership information; and

13   configuring the one or more storage devices for use by the network device;

14   creating a table on each network device in the network storage system;

15   storing entries in the table, wherein each entry identifies an owned storage device

16   of the network device storing the table.

1   51. (Currently Amended) A network storage system comprising:

2   a plurality of disks having a first ownership attribute written to a known and con-

3   stant location across all the disks and a second ownership attribute in the form of a small

4   computer system interface (SCSI) reservation tag to provide a two part indicia of owner-

5   ship, wherein the predetermined area of each disk stores definitive ownership data for

6   determining ownership of the disk, and the SCSI reservation tag allows other network

7   devices to read the ownership information from each disk; and

8   a network device with an ownership layer for comparing the SCSI persistent res-

9   ervation tag to the ownership information stored in the known and constant location of

10   the same storage device and, if there is not a match, changing the SCSI persistent reserva-

11   tion tag to match the ownership information stored in the known and constant location;

12   and

13   a table stored on the network device in the network storage system, wherein the

14   network device is configured to store entries in the table, wherein each entry identifies an

15   owned disk of the network device storing the table.

1   52. (Currently Amended) A method for a network device to manage ownership of one or

2   more storage devices in a network storage system, comprising:

reading ownership information of each storage device from a known and constant location across all storage devices, wherein the known and constant location of each storage device stores definitive ownership data for determining ownership of the storage device;

accessing a small computer system interface (SCSI) reservation tag associate with each storage device, wherein the SCSI reservation tag allows other network devices to read the ownership information from each storage device; and

comparing the SCSI reservation tag to the ownership information of the same storage device and, if there is not a match, changing the SCSI persistent reservation tag to match the ownership information stored on the storage device in the known and constant location;

creating a table on each network device in the network storage system;

storing entries in the table, wherein each entry identifies an owned storage device of the network device storing the table.

53. (Currently Amended) A method, comprising:

writing ownership information to a predetermined area of the disk to claim write ownership by a first server, wherein the predetermined area of each disk stores definitive ownership data for determining ownership of the disk;

setting a small computer system interface (SCSI) reservation tag to a state of the first server ownership to provide a two part indicia of ownership for the first server, wherein the SCSI reservation tag allows other network devices to read the ownership information from each disk; and

determining, by a second server, the disk is owned by the first server by reading the ownership information in the predetermined area of the disk.

54. (Currently Amended) A method of claiming ownership of a plurality of disks by a network device in a network storage system, comprising:

3   writing ownership information to a predetermined area of each disk, wherein the

4 predetermined area of each disk stores definitive ownership data for determining owner-

5 ship of the disk;

6   setting a reservation tag for each disk to a state of network device ownership to

7 provide a two part indicia of ownership for each disk, where the two part indicia of own-

8 ership are both written to each disk, wherein the SCSI reservation tag allows other net-

9 work devices to read the ownership information from each disk;

10   identifying all disks owned by the network device using ownership information

11 written to the predetermined area of each disk of the plurality disks and, for each identi-

12 fied disk, if a mismatch occurs between the ownership information on the predetermined

13 area of the disk and the ownership defined by the reservation tag, then using the owner-

14 ship information written to the predetermined area of the disk as definite ownership data;

15   creating a table on each network device in the network storage system; and

16   in response to identifying, storing entries in the table, wherein each entry identi-

17 fies an owned disk of the network device storing the table.

1 55. (Currently Amended) A method of claiming ownership of a plurality of storage de-

2 vices by a network device in a network storage system, comprising:

3   writing ownership information to a predetermined area of each storage device,

4 wherein the predetermined area of each storage device stores definitive ownership data

5 for determining ownership of the storage device;

6   setting a reservation tag for each disk to a state of network device ownership to

7 provide a two part indicia of ownership for each storage device, where the two part indi-

8 cia of ownership are both written to each storage device, wherein the SCSI reservation

9 tag allows other network devices to read the ownership information from each storage

10 device;

11   identifying all storage devices owned by the network device using ownership in-

12 formation written to the predetermined area of each storage device of the plurality storage

13 devices and, for each identified storage device, if a mismatch occurs between the owner-

14 ship information on the predetermined area of the storage device and the ownership de-

15 fined by the reservation tag, then using the ownership information written to the prede-

16 termined area of the storage device as definite ownership data, wherein the network de-

17 vice modifies the reservation tag without interference from a second network device; and

18   creating a table on each network device in the network storage system;

19   in response to identifying, storing entries in the table, wherein each entry identi-

20 fies an owned storage device of the network device storing the table.